REMARKS

In the Office Action, the Examiner rejected claims 1, and 3-19 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,134,705 to Pederson ("Pederson"), in view of U.S. Patent No. 6,272,529 to Lum ("Lum"). The examiner rejected claims 20-21 under 35 U.S.C. §103(a) as being unpatentable over Pederson in view of Lum as applied to claims 1, and 3-19 and further in view of U.S. Patent No. 6,925,088 to Moreaux ("Moreaux"). In this Amendment, Applicants have amended claims 1, 3, 4, 9, 11, 13, 14, and 19. Accordingly, claims 1, and 3-21 will be pending after entry of this Amendment.

I. Claims 1, 3-10 and 21

In the Office Action, the Examiner rejected claims 1, 3-10 under 35 U.S.C. §103(a) as being unpatentable over Pederson in view of Lum. The examiner rejected claim 21 under 35 U.S.C. §103(a) as being unpatentable over Pederson in view of Lum as applied to claims 1, and 3-10 and further in view of Moreaux. Claims 3-10 and 21 are directly or indirectly dependent on claim 1. Claim 1 as amended recites a data storage structure that stores several sub-networks. Each sub-network performs at least three output functions. The data storage structure stores each sub-network indexed by a parameter derived from all output functions of the sub-network.

For at least the reasons given below, Applicants respectfully submit that the combination of the cited references does not disclose, teach, or even suggest a data structure that stores several sub-networks indexed by a parameter derived from all output functions of the sub-network

First, Pederson does not disclose a data storage structure for storing sub-networks. Rather, Pederson discloses a method for generating sub-netlists in incremental compilation

but makes no mention of any data storage structures used to store the sub-netlists. In the Office Action, the Examiner cites Column 11, lines 44-60 of Pedersen as teaching a data storage structure that stores a plurality of sub-networks. Applicants respectfully submit that the cited section only specifies comparing original and changed synthesized netlists against one another to confirm which nodes of the synthesized netlist have changed. In fact, neither in the cited section, nor anywhere else, does Pederson disclose any data storage structure that stores each sub-network.

Second, Pederson does not disclose a method for indexing a data structure. In the Office Action, the Examiner specified that Pederson teaches a data storage structure that stores each sub-network based on a parameter derived from all the output functions of the sub-network, citing Figures 7E-7F and col. 16, lines 21-39 of Pederson. Specifically, the Examiner cites outputs u and v of Figures 7E and 7F of Pederson as the parameters derived at the synthesized sub-netlists. Applicants respectfully submit that the cited elements specify that hard registers can serve as external nodes for purpose of identifying a sub-netlist. Applicants respectfully submit that using hard registers (registers that are not modified during the synthesis) to identify a sub-netlist is different than storing each sub-network indexed by a parameter derived from all output functions of the sub-network.

Third, in the Office Action, the Examiner agreed that Pederson does not specifically teach that each network performs at least three output functions. In the Office Action, the Examiner cites Figure 2 of Lum as disclosing a sub-network that performs multiple output functions via I/O controllers. The Applicants respectfully submit that the cited references do not contain any suggestion (express or implied) that Lum be combined with Pederson, or that they be combined in the manner suggested. Specifically, Lum describes a distributed

computer network that, in one embodiment, is a point-of-sale Kitchen System. On the other hand, Pederson specifies a technique for performing an incremental recompile of an electronic design. The two inventions are, therefore, not from the same fields of endeavor. The use of Lum is nonanalogous to both Pederson and the present invention.

Therefore, neither Pederson nor Lum disclose, teach or even suggest a data storage structure that stores several sub-networks, each sub-network performs at least three output functions, and the data storage structure stores each sub-network indexed by a parameter derived from all the output functions of the sub-network.

In view of the foregoing remarks, Applicants respectfully submit that the cited references do not anticipate or otherwise render claim 1 invalid. Given that claims 3-10, and 21 are directly or indirectly dependent on claim 1, Applicants respectfully submit that claims 3-10, and 21 are patentable over Pederson and/or Lum for at least the reasons that were discussed above in relation to claim 1. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §103(a) rejection of claims 1, 3-10, and 21.

I. Claims 11-20

In the Office Action, the Examiner rejected claims 11-19 under 35 U.S.C. §103(a) as being unpatentable over Pederson in view of Lum. The examiner rejected claim 20 under 35 U.S.C. §103(a) as being unpatentable over Pederson in view of Lum as applied to claims 11-20 and further in view of Moreaux. Claims 12-20 are directly or indirectly dependent on claim 11. Claim 11 as amended recites a sub-network record management systems that includes a data storage structure that stores several sub-networks. Each sub-network performs at least three output functions. The data storage structure stores each sub-network indexed by a parameter derived from all output functions of the sub-network.

For at least the reasons given below, Applicants respectfully submit that the combination of the cited references does not disclose, teach, or even suggest a data structure that stores several sub-networks indexed by a parameter derived from all output functions of the sub-network

First, Pederson does not disclose a data storage structure for storing sub-networks. Rather, Pederson discloses a method for generating sub-netlists in incremental compilation but makes no mention of any data storage structures used to store the sub-netlists. In the Office Action, the Examiner cites Column 11, lines 44-60 of Pedersen as teaching a data storage structure that stores a plurality of sub-networks. Applicants respectfully submit that the cited section only specifies comparing original and changed synthesized netlists against one another to confirm which nodes of the synthesized netlist have changed. In fact, neither in the cited section, nor anywhere else, does Pederson disclose any data storage structure that stores each sub-network.

Second, Pederson does not disclose a method for indexing a data structure. In the Office Action, the Examiner specified that Pederson teaches a data storage structure that stores each sub-network based on a parameter derived from all the output functions of the sub-network, citing Figures 7E-7F and col. 16, lines 21-39 of Pederson. Specifically, the Examiner cites outputs u and v of Figures 7E and 7F of Pederson as the parameters derived at the synthesized sub-netlists. Applicants respectfully submit that the cited elements specify that hard registers can serve as external nodes for purpose of identifying a sub-netlist. Applicants respectfully submit that using hard registers (registers that are not modified during the synthesis) to identify a sub-netlist is different than storing each sub-network indexed by a parameter derived from all output functions of the sub-network.

Third, in the Office Action, the Examiner agreed that Pederson does not specifically teach that each network performs at least three output functions. In the Office Action, the Examiner cites Figure 2 of Lum as disclosing a sub-network that performs multiple output functions via I/O controllers. The Applicants respectfully submit that the cited references do not contain any suggestion (express or implied) that Lum be combined with Pederson, or that they be combined in the manner suggested. Specifically, Lum describes a distributed computer network that, in one embodiment, is a point-of-sale Kitchen System. On the other hand, Pederson specifies a technique for performing an incremental recompile of an electronic design. The two inventions are, therefore, not from the same fields of endeavor. The use of Lum is nonanalogous to both Pederson and the present invention.

Therefore, neither Pederson nor Lum disclose, teach or even suggest a data storage structure that stores several sub-networks, each sub-network performs at least three output functions, and the data storage structure stores each sub-network indexed by a parameter derived from all the output functions of the sub-network.

In view of the foregoing remarks, Applicants respectfully submit that the cited references do not anticipate or otherwise render claim 11 invalid. Given that claims 12-20 are directly or indirectly dependent on claim 11, Applicants respectfully submit that claims 12-20 are patentable over Pederson and/or Lum for at least the reasons that were discussed above in relation to claim 11. In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the §103(a) rejection of claims 11-20.

CONCLUSION

In view of the foregoing, it is submitted that all pending claims, namely claims 1, and 3-21 are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance is earnestly solicited at the earliest possible date.

Respectfully submitted,

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